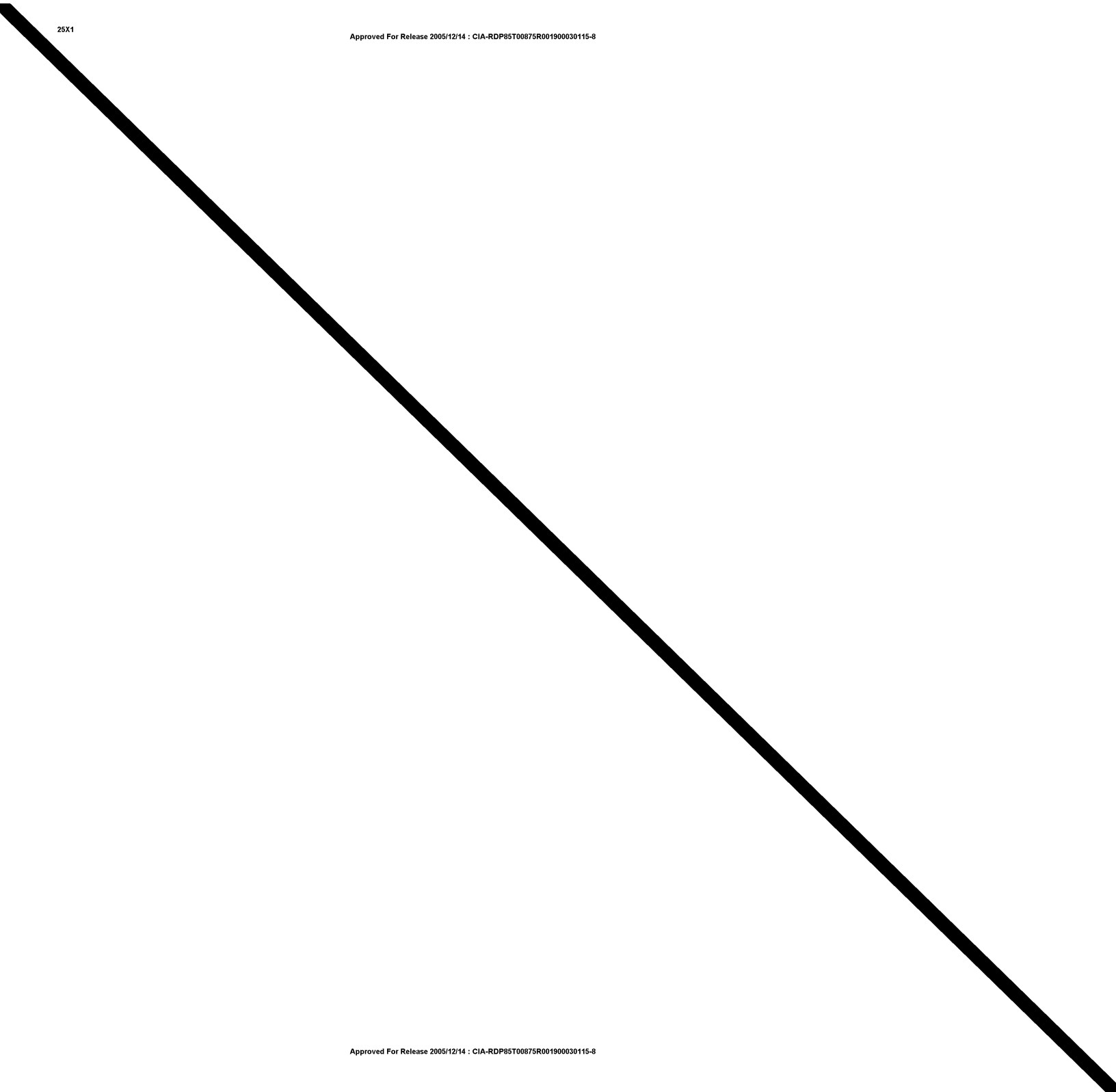


SHORT-TERM MARKET OUTLOOK FOR WORLD OIL

September 1974

SHORT-TERM MARKET OUTLOOK FOR WORLD OIL

KEY JUDGMENTS

With normal weather and normal stock drawdowns, Free World oil import demand this winter will likely fall more than 1 million b/d below the current level.

If countries attempted to maintain present commercial stock levels, imports from OPEC countries would increase by only about 500,000 b/d.

If not offset by stock drawdowns, an especially severe winter would increase demand by about 4% and imports by about 2 million b/d.

DISCUSSION

Free World Oil Demand

1. Before the energy crisis began last fall, Free World oil consumption was expected to grow by 6% or 7% this year. Consumption has been slightly below 1973 levels thus far this year because of the economic downturn in the major industrial countries and consumer reactions to record high oil prices. During the first half of 1974, oil consumption averaged about 47 million b/d. Consumption probably will also average about 47 million b/d during the last half, barring a major US coal strike or an unusually severe winter without correspondingly large drawdowns of stocks. With GNP growth for developed countries likely to be less than 2% during the next nine months, consumption probably will be about the same in the first half of 1975 as the last half of 1974. While average consumption is expected to change little over the next nine months, there will be wide seasonal fluctuations. How the seasonal factors are met will determine Free World demand for OPEC oil.

2. In a normal winter, Free World countries' oil consumption usually rises about 5-1/2 million b/d above consumption during the preceding summer. Consumption in the third quarter is estimated at 44.5 million b/d. Free World oil consumption is expected to average about 50 million b/d in the fourth quarter of 1974 and in the first quarter of 1975. If normal stock drawdown practices are followed, the demand for oil imports will actually fall.* The Free World oil picture would then correspond to the estimates in Table 1. If, however, Western Europe and Japan decided to maintain oil stocks at near capacity levels throughout the winter for security or other reasons, the seasonal increase in oil consumption should be reflected in increased oil imports. In this case, Free World oil import demand would rise to about 29.3 million b/d in the fourth quarter of 1974 and slightly more than that in the first quarter of 1975. Imports would need to increase at about 500,000 b/d from the third quarter of 1974.

3. Free World countries generally are expected to try to hold stock drawdown below normal levels. Japan's fourth-quarter import plans indicate that Tokyo plans to build up stocks during the winter. Information on the plans of EC countries is not available, but they too will attempt to keep stocks high. The

* The 5.5 million b/d seasonal increase would be more than offset by the switch from a stock buildup of 3.8 million b/d in the third quarter of 1974 to a stock drawdown averaging 2.8 million b/d in the next two quarters.

Table 1

Free World: Projected Oil Demand, Production, and Imports
(Assuming Normal Stock Changes)

Million b/d

	Total Free World	United States	Western Europe	Japan	Other
			Third Quarter 1974		
Consumption	44.5	16.5	13.0	4.7	10.3
Domestic production	19.2	11.1[1]	0.4	0	7.7[2]
Stock changes	+3.8	+1.0	+2.2	+0.6	Negl.
Import demand	29.1	6.4	14.8	5.3	2.6
			Fourth Quarter 1974		
Consumption	49.5	18.0	16.2	5.0	10.3
Domestic production	19.3	11.1[1]	0.4	0	7.8[2]
Stock changes[3]	-2.6	-0.9	-1.4	-0.3	Negl.
Import demand	27.6	6.0	14.4	4.7	2.5
			First Quarter 1975		
Consumption	50.1	18.3	16.3	5.1	10.4
Domestic production	19.4	11.1[1]	0.4	0	7.9[2]
Stock changes[3]	-3.0	-1.1	-1.6	-0.3	Negl.
Import demand	27.7	6.1	14.3	4.8	2.5
			Second Quarter 1975		
Consumption	44.8	16.3	13.3	4.8	10.4
Domestic production	19.7	11.1[1]	0.7[4]	0	7.9[2]
Stock changes[3]	+2.8	+1.0	+1.5	+0.3	Negl.
Import demand	27.9	6.2	14.1	5.1	2.5

1. Including natural gas liquids and processing gain.
2. Excluding OPEC production that is exported.
3. Excluding security stocks.
4. Including 300,000 b/d of production from Norway.

United States has not announced a stock policy, so normal drawdowns were assumed. (If US stocks were not drawn down, US import demand would increase a maximum of 1 million b/d.) On balance, the Free World demand for oil imports during the fourth quarter of 1974 and the first quarter of 1975 probably will remain close to the present level of about 29 million b/d (see Table 2). The need

Table 2

Free World: Projected Oil Demand, Production, and Imports[1]

Million b/d

	1974		1975	
	Third Quarter	Fourth Quarter	First Quarter	Second Quarter
Consumption	44.5	49.5	50.1	44.8
Stock change	+3.8	-1.6	-2.0	+2.4
Demand	48.3	47.9	48.1	47.2
Production[2]	19.2	19.3	19.4	19.7
Import requirements	29.1	28.6	28.7	27.5
Imports from Communist countries	0.7	0.7	0.7	0.7
Imports from OPEC countries	28.4	27.9	28.0	26.8

1. Best estimates, which assume below-normal stock drawdowns this winter.
2. Excluding OPEC production that is exported.

for OPEC oil would fall slightly in the second quarter of 1975 as demand went into its usual seasonal decline.

4. The weather is an important factor in winter demand for oil. In the past, severe winters have added as much as 4% to oil demand. An unusually cold 1974/75 winter could raise Free World oil import demand by 2 million b/d above projections unless offset by stock drawdowns.

5. A second factor that could increase Free World oil import demand would be a major coal miners' strike in the United States. US coal production currently provides the equivalent of some 7 million b/d of oil to US industry. In the event of a coal strike, as much as two-thirds of this supply -- or about 4 million b/d of oil equivalent -- could be disrupted. A substantial amount of this coal is consumed by utilities and other users that have the ability to convert to oil. Because coal stocks are far below normal levels, some establishments would switch quickly to oil. A coal strike that lasted for more than a few weeks could add about 2 million b/d to US oil demand for its duration.

Free World Oil Supply

6. Free World requirements for OPEC oil probably will fall a little below the third quarter level of 28.4 million b/d in the next two quarters and then drop by more than 1 million b/d in the following quarter. The figures reflect:

- the forgoing projections of demand and inventory change,
- an expected gradual rise in oil production in non-OPEC, non-Communist countries from 19.2 million b/d in the third quarter of 1974 to 19.7 million b/d in the second quarter of 1975, and
- an expected continuation of net imports from Communist countries of about 700,000 b/d.

The increase in non-OPEC oil production will come mainly from Mexico (up an estimated 100,000 b/d over the next two quarters) and Norway (where North Sea production is expected to reach 300,000 b/d in the second quarter of 1975).

RECENT CUTBACKS IN WORLD OIL PRODUCTION

Oil production in the OPEC countries has been cut by 1.9 million b/d, or 6%, from its post-crisis peak in May. Output is now 9% lower than in September 1973 and 18% below estimated production capacity, taking a conservative estimate for Saudi capacity of 9.7 million b/d (including the Neutral Zone). In spite of the recent cuts, world oil output still is running more than 1.0 million b/d above demand.

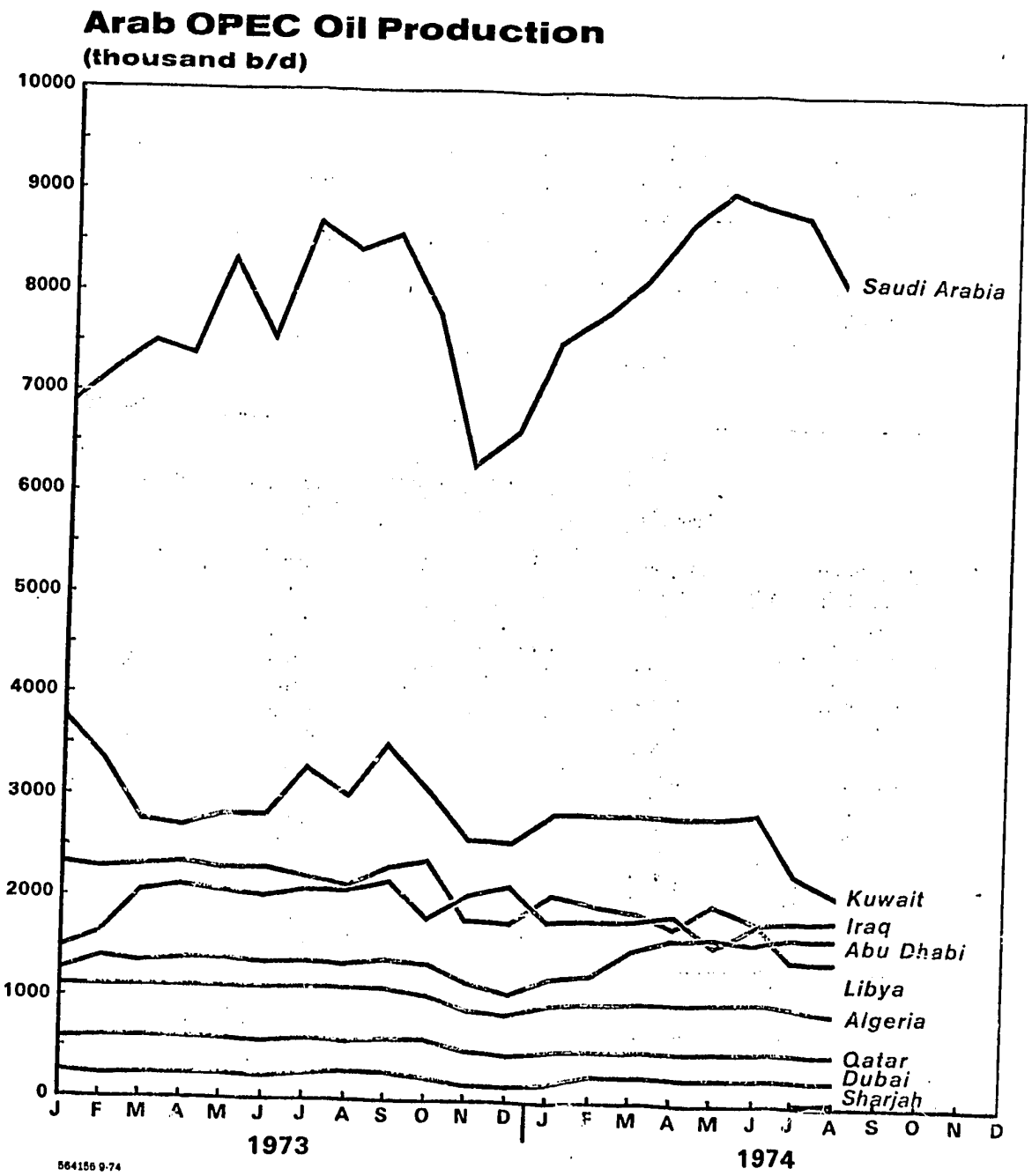
Recent Trends in OPEC Oil Production

Thousand b/d

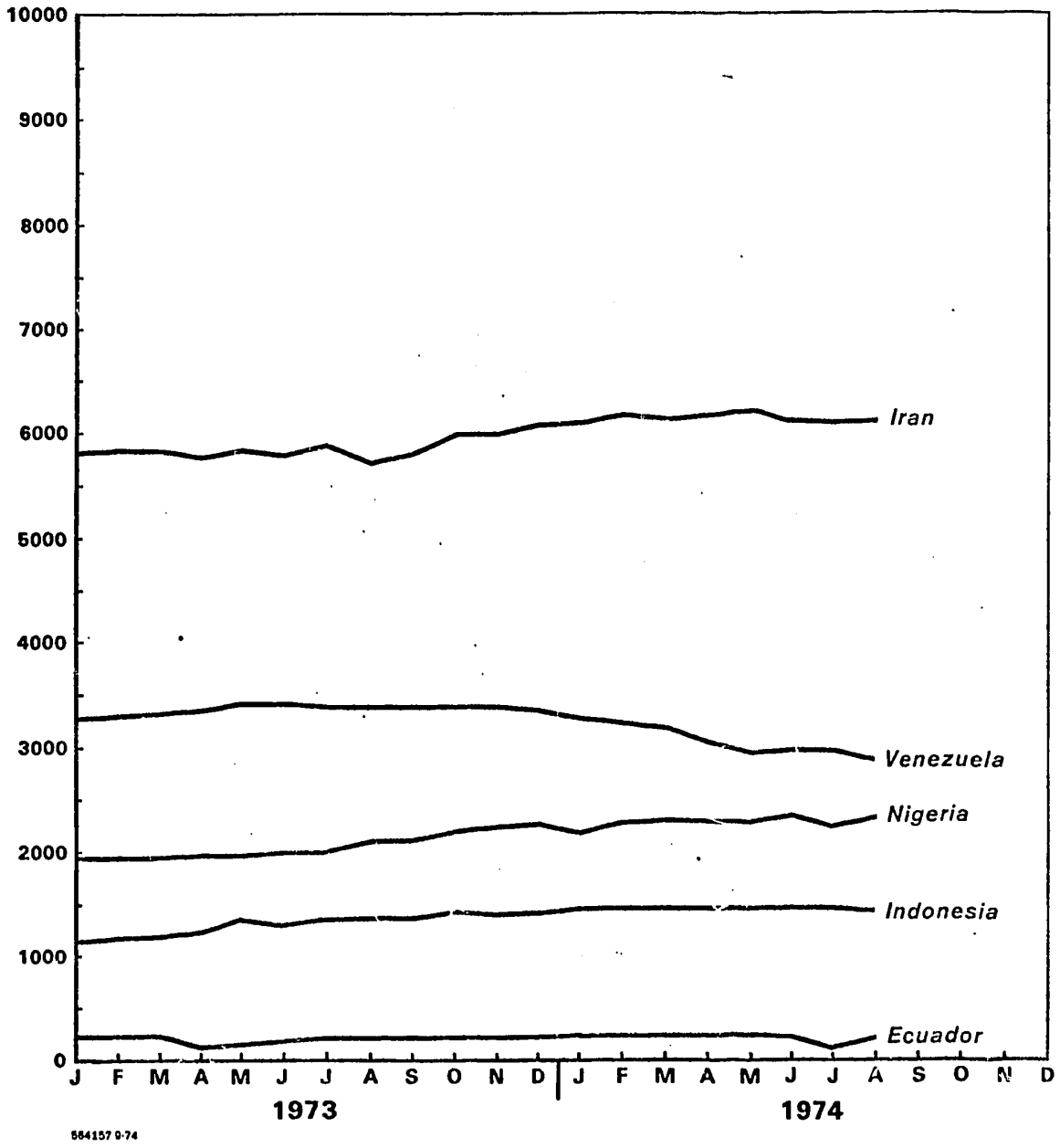
	Production		Production Changes since May	Estimated Capacity	Current Amount of Unused Capacity
	May 1974	Sep 1974			
Total OPEC	**31,890**	**29,990**	**-1,900**	**36,650**[1]	**6,660**[1]
Abu Dhabi (UAE)	1,640	1,350	-290	1,900	550
Algeria	1,000	900	-100	1,100	200
Dubai (UAE)	230	240	10	300	60
Ecuador	240	140	-100	240	100
Indonesia*	1,480	1,400	-80	1,500	100
Iran	6,180	6,060	-120	6,200	140
Iraq	1,590	1,810	220	2,500	690
Kuwait	2,840	2,100	-740	3,800	1,700
Libya	1,950	1,500	-450	3,000	1,500
Nigeria	2,270	2,310	40	2,350	40
Qatar	520	520	....	700	180
Saudi Arabia	9,020	8,800	-220	9,700[1]	900[1]
Sharjah (UAE)	....	60	60	60	....
Venezuela	2,930	2,800	-130	3,300	500

1. Minimum figure.

Liftings have been reduced mainly because the producing countries have been unable to market all their government-owned oil. The phenomenal jump in crude oil prices since last year has caused a widespread falloff in demand for petroleum products. Refinery runs have been curtailed, and worldwide crude oil inventories still are very large. Since storage capacity is nearly exhausted, foreign companies have had little interest in buying government oil, which costs even more than their equity oil. Liftings in Venezuela have been restricted as part of government conservation measures.



Non-Arab OPEC Oil Production



OPEC CONFERENCE RESULTS

OPEC decided last week to freeze posted prices for the fourth quarter of 1974, but to increase member governments' take by 3.5% effective 1 October to compensate for inflation. Because tax and pricing policies differ substantially among OPEC countries, the increase will take a variety of forms. For those producers who have a dual price system, taxes on equity oil will be boosted; for those with a single system some other mechanism will be used.

A straight application of the OPEC formula indicates that the weighted average cost to the producing companies for benchmark crude will increase by at least 33 cents, to $9.84 per barrel. Actually, we think it likely that the increase will be on the order of 40 to 50 cents.

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[redacted] we would expect that most of the increased cost of oil will be passed on to the consumer.

Under the new system, royalties and taxes on equity crude will increase to 16-2/3% and 65-3/4%, respectively, from the current 14-1/2% and 55%. The new cost of equity oil will be $8.36 per barrel -- an increase of $1.15 per barrel. The cost of participation crude will decline 22 cents, from 94.9% of posted price ($11.05) to 93% of posted price ($10.84). The following table depicts how the new calculations might look.

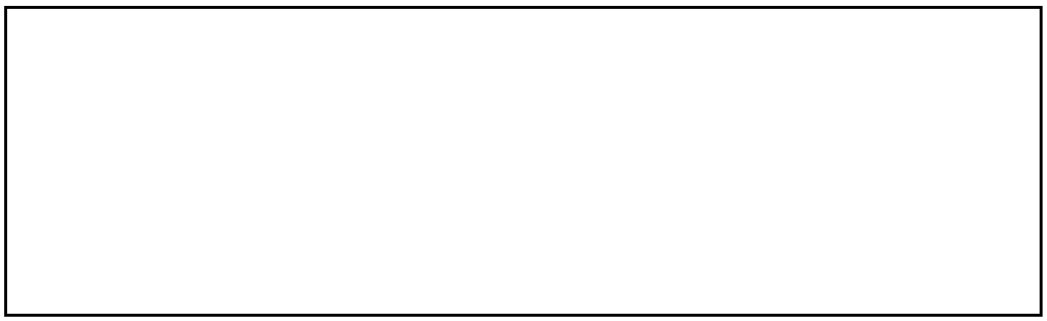
OPEC Price Calculations

US $ per Barrel

	Old Benchmark Crude	New Benchmark Crude
1. Posted price	11.651	11.651
2. Royalty	1.689 (14-1/2% of 1)	1.942 (16-2/3% of 1)
3. Production cost	0.100	0.100
4. Profits for tax purposes (1-(2+3))	9.862	9.609
5. Tax	5.424 (55% of 4)	6.318 (65-3/4% of 4)
6. Government revenue (2+5)	7.113	8.260
7. Cost of equity oil (40% of production)	7.213	8.360
8. Cost of Participation oil (60% of production)	11.052 (94.86% of posted price)	10.835 (93% of posted price)
9. Average weighted cost	9.516	9.845

Our analysis of the OPEC agreements and prevailing buyback prices, however, suggests that the actual increase in the cost of oil may be closer to 5% than the 3-1/2% OPEC claims. This would equate to 40 to 50 cents per barrel rather than the 33 cents per barrel used by OPEC. The basis for our analysis is the fact that Kuwait was the only country that was officially and publicly charging the 94.86% of posted price for their buyback oil. Because of buyer resistance, more than 500,000 b/d of the high-priced buyback oil was shut in. As a result, the average cost of Kuwaiti oil was about $8.70 per barrel. The informally accepted buyback price throughout the Gulf was more like 93% of posted price. If the price of participation crude was closer to 93%, the average cost of the old benchmark crude would be $9.39, and the new $9.84. This would be an increase of 45 cents per barrel, or almost 5%, rather than 33 cents per barrel.

The explanation as presented can easily be applied to those OPEC countries where the 60-40 ownership relationship exists. There are, however, several OPEC members who have either a single price for their oil or who own more than 60% of production. In these cases, we are not yet sure how the price increase will be implemented. In addition, most oil outside the Gulf is more expensive. If OPEC members outside the Gulf apply only a 3-1/2% increase to the price of their oil, the average increase would be about 40 cents per barrel. In sum, the new OPEC proposals would appear to add a minimum 40 to 50 cents per barrel to the cost of oil.



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Several other decisions came out of the OPEC conference:

- As of January 1975, the rate of inflation in industrialized countries will automatically be taken into account when adjusting new prices.

- A working committee will study a new system for long-term oil pricing.

- A study will be made on the subject of supply and demand. In the meantime, a number of countries announced their decision to make a voluntary cutback in their production level.

- A report of the working party on the OPEC development fund was examined and the members decided to continue aid on a bilateral as well as a multilateral basis.

RECENT OIL AND GAS DISCOVERIES IN NON-OPEC COUNTRIES

This article updates and expands an earlier review of important oil and gas discoveries outside the OPEC nations since 1972. Successful development and sharing of production from these new deposits would significantly increase world petroleum supply and reduce dependence on OPEC countries. (Note: Numbers on the map correspond to the the following paragraphs.)

Western Hemisphere

Mexico

1. *Chiapas and Tabasco States.* Recently announced plans by the Mexican government to regain crude oil self-sufficiency in the 1974-76 period were unexpectedly achieved by July of this year. Rapid growth in oil production from newly discovered fields in the southeastern -- Cactus, Citio Grande, and Samaria -- producing area is far outpacing plans. Oil output in the first half of 1974 increased sufficiently to allow Mexico to surpass its previous production record of 521,000 b/d set in 1921, terminate oil imports (which reached 65,000 b/d in 1973), and declare an exportable surplus of 30,000 b/d - 60,000 b/d. Crude oil production from the new southeastern fields grew at the rate of 10,000 b/d per month during the January - mid-September period, rising from 150,000 b/d to 229,000 b/d, and it is expected to hit 250,000 b/d by yearend. The government has earmarked $1.4 billion for further exploration and development of 12 to 15 new [illegible]res in this area during 1974-76. Mexican oil output is expected to reach 7[illegible],000 b/d by January 1975 and to exceed 1 million b/d in 1980, largely as a result of these new fields. The 1980 production level rests on the discovery of about 2 billion barrels of recoverable oil.

Canada

2. *Arctic Islands-Beaufort Sea.* Five very large but remote natural gas fields and two oil and gas deposits have been discovered in the Sverdrup Basin - Beaufort Sea area. Gas reserves currently are estimated at 24 trillion cubic feet (cu ft), including 7 trillion cu ft at Drake Point on Melville Island. Data are insufficient to assess oil reserves. Available geophysical and geological information indicates that Sverdrup Basin reservoirs are of Middle East quality; daily well flows of 5,000-10,000 barrels of oil and 20 million-40 million cu ft of gas have been reported. More than 200 seismic structures have been mapped, but most are still undrilled. Some anticlines are 100 miles long. The rock column is completely intact with sediments that are up to 30,000 feet thick and embrace all of the world's known producing strata.

3. *Mackenzie River Delta.* Discoveries to date include at least seven multizone gas condensate deposits, containing reserves of about 40 trillion cu ft and four oil fields, some with Devonian reef reservoirs. Commercial gas development

awaits the discovery of a few more large deposits to justify construction of a pipeline to southern markets.

4. Offshore Labrador. Eastcan Ltd., a group of US-French Canadian subsidiaries, is reported to have made a big oil discovery at the Bjarni wildcat about 50 miles off Labrador's eastern coast in 1973. Evaluation drilling resumed this August at a second wildcat, the Gudrid, to the southeast, and it also has encountered oil shows which have not yet been tested. The drillship Pelican will return to the Bjarni discovery well for additional formation testing after the Gudrid is completed. "Iceberg Alley" is a difficult place for drillships to work. Ice conditions forced the operators to evacuate the Bjarni area before testing was completed last fall, and the Pelican already has sustained some damage at the Gudrid site.

5. Offshore Nova Scotia and Newfoundland. Despite considerable drilling on the continental shelf bordering Sable Island, about 100 miles off Nova Scotia, no outstanding successes have been achieved. Several natural gas condensate discoveries are potentially commercial; they have yielded test flows of up to 12 million cu ft of gas and 1,000 barrels of condensate per day. Lateral extension wells at these deposits have proved disappointing, however, and more evaluation drilling is needed to complete the geological picture. Elsewhere, drilling activity has picked up off Newfoundland and in the St. Lawerence Gulf.

Central and South America

6. Guatemala. The Shenandoah Oil Group has reported two oil finds – 11 miles apart and in different producing zones – on a 900,000-acre concession in northern Guatemala. One find flowed 2,250 b/d from Cretaceous zones at depths of 4,100 and 5,250 feet. Productive zones are thin, but depths and reservoir conditions are favorable. Deeper zones also appear promising but have not yet been tested. The other oil discovery occurred at 2,400-foot depths on a salt dome 120 miles north of Guatemala City. Producing potential of this reservoir was rated at 5,000 b/d to 10,000 b/d of 35-degree gravity oil. Neither strike can be declared commercial until the pool limits are delineated.

7. Peru-Amazon Basin. The biggest exploration drilling boom in South America is still under way in the remote provinces east of the Andes Mountains. Of the 42 structures so far seismographed, 15 have been drilled and declared oil discoveries by Petroperu and Occidental Oil Co. Petroperu, the state oil company, has budgeted funds for an additional 385 exploratory wells during 1974-76. Farther south, many other companies have joined in the oil hunt; exploration activity is spreading into Brazil and Bolivia.

Peru claims that 400 million barrels of oil reserves had been found as of the end of 1973 – 300 million by Occidental. Oil production is expected to rise to 79,000 b/d in 1974, 300,000 b/d in 1976, and about 1 million b/d in 1979. Reservoir porosities, permeabilities, and water drives are good but water "coning" has caused some serious production problems in Petroperu's fields.

8. Chile-Argentina-Tierra del Fuego. Chile's state oil company, ENAP, claims to have found a 470 million-barrel offshore field in the Straits of Magellan between Cabo Dungeness and Punta Delgada in 1973. This year, Argentina's state oil firm, YPF, started offshore exploration to the north and southeast of the Chilean discovery. Argentina's offshore continental shelf, including the Falkland Islands plateau, represents one of the largest and most promising unexplored areas in the world.

Eastern Hemisphere

Western Europe

9. North Sea. Nine giant oilfields have been discovered thus far in the northern half of the North Sea, each containing between 1 billion and 2 billion barrels of oil. Another two dozen finds of smaller size boost the North Sea's present recoverable reserves to 15 billion barrels. About 460 exploratory wells had been drilled in the North Sea by the end of 1973, some 200 in the northern sector. Only the 80 most promising prospects out of a total of 220 structures have been drilled. Many of the best prospects, located in Norwegian waters, remain unexplored because of government policy. Potential recoverable reserves could eventually amount to 40 billion barrels of oil plus 50 trillion to 100 trillion cu ft of natural gas. Most gas fields were found during 1965-70 and are in the southern half of the North Sea.

High discovery rates are being maintained in both the Norwegian and British sectors, with one out of eight wildcats striking oil. Drill-stem tests of most reservoirs recorded low gas-oil ratios; with early pressure maintenance by water injection, however, these reservoirs could match or exceed the productivities of many Middle East fields. Well flows of 8,000 to 15,000 b/d have been reported at many deposits. Production rates could reach 3 million b/d in 1980 and 5 million to 6 million b/d by 1985, given additional discoveries and the absence of political constraints on output. North Sea oils are high-quality 35-44-degree gravity crudes with only 0.2% - 0.4% sulfur content. They resemble North African oil, which is ideally suited for North European refinery needs in the production of distillate fuels. Low transport costs and current prices should make any deposit containing 200 million barrels or more of recoverable oil commercially feasible.

10. Ireland. Marathon Oil company has discovered a small gas field off Kinsale on the southern coast, containing about 1 trillion cu ft of gas. Exploration activity has also been spurred by reports of the area's first oil show in a wildcat well recently abandoned by Esso.

11. Sweden. A small oil find, which could extend into the Baltic Sea, has been made by the state oil company on the island of Gotland. More prospecting is planned by the Swedes and the Finns. When fully developed, the Swedish find is expected to produce 40,000 b/d.

12. Greece. Oil has been discovered in a large structure called Prinou, about 10 miles off Kavalla in the Aegean Sea. Development plans provide for initial producing capacity of about 50,000 to 100,000 b/d. Prior reports that the structure contains 2 billion barrels seem premature; only two wells have been drilled so far.

13. Italy. The Italian State Oil Company, ENI, and its partners continue to find small gas fields in offshore waters of the Po River Delta in the Adriatic Sea. Elf Italiana has reported the Adriatic's first offshore oil discovery, which is small but somewhat promising. A deep onshore gas discovery has also been made near Milan; it tested 16 million cu ft of gas and 1,600 barrels of condensate per day from a 17,389-foot-deep Pre-Tertiary reservoir. Deeper gas horizons in the old Po Valley producing region could prove significant. The one well completed thus far could supply up to 15% of Italy's annual gas requirements, if current well flows are sustained.

14. Spain. One offshore oil field has been found by Shell, at the mouth of the Ebro River on the eastern coast. This pool, the Amposta Marino, should produce 20,000 b/d initially. The crude is a very heavy, low-quality oil with high sulfur content, but domestic refineries can adapt to its specifications.

Africa

15. Egypt. Amoco placed its new July Field on production after the Arab-Israeli truce. This deposit, which is located in the Gulf of Suez and northwest of the large El Morgan Pool, contains about 600 million barrels of oil. Production should reach a peak of 100,000 b/d in 1975, helping to make up for the prolonged decline in El Morgan output.

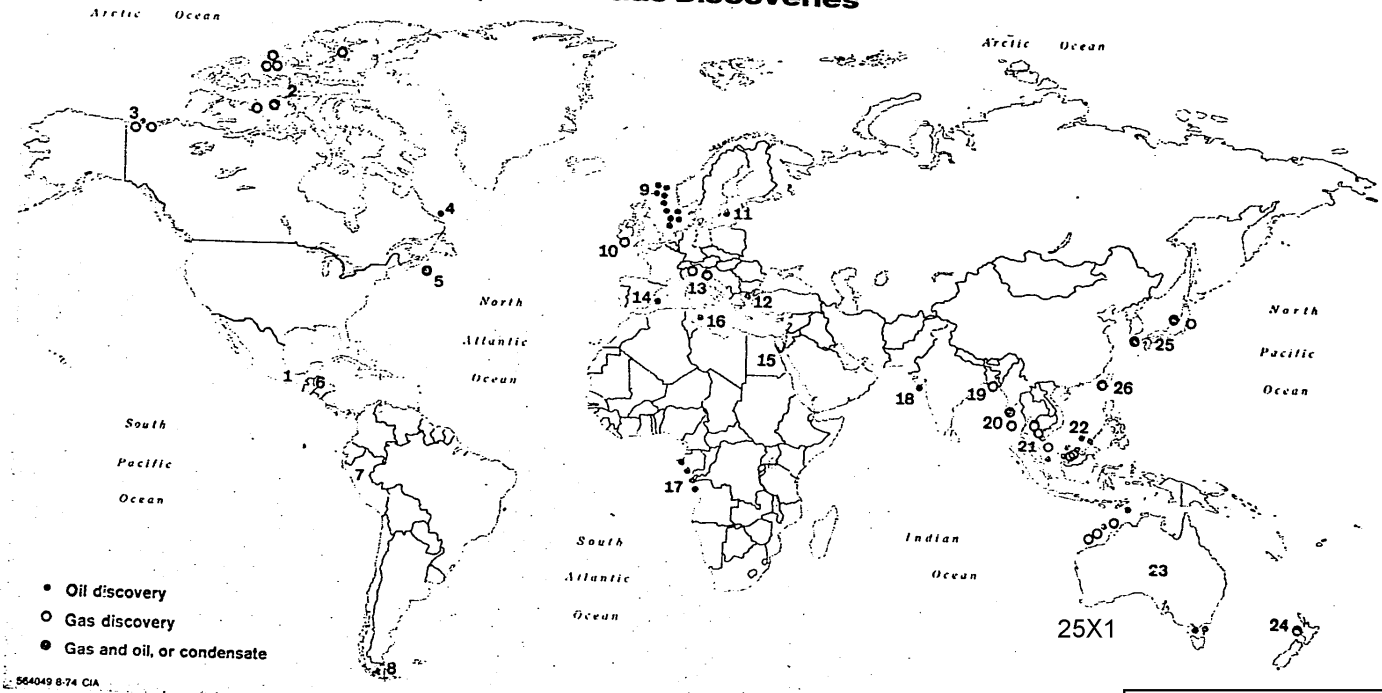
16. Tunisia. Amoco has reported a 290 million-barrel discovery at Ashtart, 120 miles off Sfax in the Gulf of Gabes. With its capacity of 25,000-40,000 b/d, the new oilfield should offset depletion of older finds and raise Tunisian oil output to 100,000 b/d in 1975.

17. Equatorial Africa's West Coast. Numerous oil discoveries have been reported along the continental shelf: three in Gabon, two in Congo, two possibles in Zaire, one in Cabinda, and two or three in Angola. One giant 7 billion-barrel field has been found at Emeraude, offshore Congo, but the high viscosity of this oil may permit only 7% recovery of the reserves in place. Oil potential elsewhere in the area is good. Several major companies are interested in the far reaches of the continental slope, where possible salt dome structures and associated oil traps are believed to exist beneath 10,000 feet of water. Shell recently started to drilling in 2,150 feet of water off Gabon -- a world record for water depth in exploratory drilling.

South and Southeast Asia-Oceania

18. India. The state-owned company, ONGC, has succeeded in discovering oil on the "Bombay High" in offshore waters about 115 miles northwest of the

Recent Worldwide (Non-OPEC) Oil and Gas Discoveries



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city of Bombay. After a decade of unproductive effort with cumbersome Soviet equipment, the Indians last year acquired a new Japanese-built offshore drilling platform that enabled them to drill and test this large structure. As a result, about 500 b/d of high-quality 43-degree gravity oil and 1.5 million cu ft of gas were recovered from 3,300-foot depths. Further evaluation is needed, but ONGC expects the well to produce 3,500-4,000 b/d. India also has recently opened up its offshore continental shelf in the Bay of Bengal and in the Gulf of Kutch to two groups of US oil firms; seismic operations are about to get under way.

19. Bangladesh. Six gas fields, containing about 4 trillion cu ft of natural gas reserves, have been found. Offshore oil leases were recently granted to a group of US oil firms, and seismic boats are due to start operations soon.

20. Burma. A US drilling contractor working for the Burmese State Oil Company (MOC) has struck oil and gas in commercial quantities in the Gulf of Martaban, south of the Irrawaddy River Delta. Onshore exploration of the Arakan Coast along the Bay of Bengal is getting under way following the delivery of several new US drilling rigs. Offshore waters of the Andaman Sea to the south also have been opened up to Western companies during the past year. Exploration activity should increase markedly as a result of several shows of oil and gas.

21. Thailand. Tenneco, Union, and Gulf are testing possible commercial gas, condensate, and oil discoveries off the east coast in the Gulf of Thailand. Along the western continental shelf, in the Andaman Sea, new exploration licenses have been issued to several US companies during the past year. Because the country's offshore petroleum potential is regarded as highly favorable, exploration activity is expected to intensify.

22. Malaysia-Brunei. The Malaysian-Brunei sector of the South China Sea is southeast Asia's second most successful petroleum exploration area, after Indonesia. Approximately 15 offshore oil and gas finds have been recorded to date. Six oil and four gas fields discovered in Malaysian waters since 1972 appear to be commercial. Malaysian oil production is expected to jump from 100,000 b/d last year to 500,000 b/d in 1976 and 800,000 b/d in 1980. Natural gas production may reach 1 billion cu ft per day by the end of the decade.

Brunei has long been a large oil producer, with output averaging 225,000 b/d in 1973. New offshore discoveries should boost oil and gas production considerably. Shell, the area's most successful operator, has made 10 discoveries in Sarawak, Brunei, and Sabah. Esso, Continental, and Total have drilled five oil and gas discoveries in Malaysian waters.

23. Australia. The Woodside-Burmah combine has found six major gas deposits and one major oil pool on the northwest continental shelf. The Arco Group has discovered oil in the Timor Sea 160 miles north of Australia. This wildcat flowed 4,270 b/d of 42-degree gravity oil from a thin shallow sand at 6,600-foot depths; the absence of a thick reservoir nevertheless will require

additional drilling to determine the commercial value of the prospect. Esso - Broken Hill Party has discovered multizone oil and gas accumulations off Victoria in Bass Strait, where recoverable oil reserves now exceed 2 billion barrels.

24. New Zealand. Development of the large Maui gas condensate field in 400-foot-deep waters off the southwest tip of North Island is now beginning. Reserves are estimated at 5 trillion cu ft of recoverable gas plus several hundred million barrels of natural gas liquids.

Far East

25. Japan. Amoco has found an oil and gas field off Niigata, on the west coast of Honshu Island. Discovery and evaluation wells flowed up to 1,500 barrels of oil and 35 million cu ft of gas daily. A production platform for 12 wells was installed in 330 feet of water this spring. Esso has made a commercial gas discovery 25 miles off Iwaki on Honshu Island's east coast. This well flowed 30 million-35 million cu ft of gas per day, and further evaluation is now in progress. Shell is reported to have a major offshore oil and gas discovery 45 miles southwest of Nagasaki on Kyushu Island, where 10 producing zones were penetrated by one well.

26. Taiwan-Republic of China. The Amoco-Conoco-Chinese Petroleum Group has reported an important discovery of natural gas condensate off the southwest tip of Taiwan in the Formosa Straits. The exploratory well was located in 400 feet of water and drilled to a 12,950-foot depth. Daily flow rates of 25 million cu ft of gas and 250 barrels of condensate were reported. Further evaluation drilling of the prospect is planned.

Estimated OPEC Oil Receipts in 1974

OPEC members will earn an estimated $100 billion from oil exports in 1974. Their actual receipts for this oil will approximate $85 billion, the difference between the figures being explained by the lag in payments. On the average, producing countries are paid about two months after the oil is shipped. The lag has narrowed over the past year, and there are indications that it may decline further.

Actual OPEC receipts for oil are expected to rise from $31 billion in the first half of 1974 to $54 billion in the second half – an increase of three-fourths. Oil company payments in the second half will fully reflect the January price increase, and full payments for participation oil will begin in October. In addition, retroactive payments for participation oil received in the first half from Iran, Libya, and Saudi Arabia will be made in six equal monthly installments beginning in September.

OPEC oil receipts will bulge substantially in October. Smaller payments bulges occurred in January, April, and July. Transfers of the magnitude likely to occur next month could well spark rumors and speculative capital movements, destabilizing financial markets.

Quarterly equity payments to certain OPEC countries account for most of the bulge. Abu Dhabi, Kuwait, Qatar, Iraq, Libya, Algeria, and Indonesia receive taxes and royalties one month following the end of each quarter. Receipts in July also were increased by a $1.9 billion retroactive payment for participation oil to Kuwait.

In October (possibly including the first few days of November because of time lags), OPEC countries will receive an estimated $7-1/2 billion from the oil companies for equity oil. Retroactive payments and current receipts for participation oil probably will bring in another $4 billion. The attached tables show the OPEC countries' monthly and quarterly oil receipts for 1974 and a provisional balance of payments.

OPEC Countries: Oil Receipts, 1974

Million US $

	Equity	Participation	Total
Jan	3,879	486	4,365
Feb	2,850	568	3,418
Mar	3,083	581	3,664
1st qtr			**11,447**
Apr	7,440	1,385	8,825
May	3,795	1,271	5,066
Jun	4,014	1,475	5,489
2d qtr			**19,380**
Jul	7,485	3,556	11,041
Aug	4,143	1,659	5,802
Sep	3,941	4,588	8,529
3d qtr			**25,372**
Oct	7,491	4,275	11,766
Nov	4,014	4,167	8,181
Dec	4,125	4,177	8,302
4th qtr			**28,249**

OPEC Countries: Estimated Balance of Payments

Billion US $

	1974	
	1st Half	2d Half
Export receipts	33.3	56.4
Oil	30.8	53.6
Non-oil	2.5	2.8
Import payments (c.i.f.)	14.7	17.7
Trade balance	18.6	38.7
Net services	-0.7	0.7
Current account balance	17.9	39.4
Increase in reported reserves[1]	16.9	

1. Reserves, for most producers, were taken from *International Financial Statistics*. International liquidity for Qatar and the UAE were derived from estimated current account balances.

Consumer Government Taxes on Petroleum

1. Consumer government taxes on oil vary widely. The total tax take per barrel of oil was calculated on the basis of consumption patterns and tax rates on the four major products -- which account for about 85% of total consumption.

2. Import duties on products and crude oil constitute only a very small portion of total consumer taxes on oil products. Most countries do not impose duties on crude oil, while imported products account for only a small share of consumption.

- France -- no import duty on crude oil and products.
- Italy -- an 84 cents per barrel import duty on products, but no duty on crude oil. Because product imports account for only 4% of total oil imports, the average duty is about 3 cents per barrel.
- Japan -- an import duty on crude oil and products of 15 cents per barrel.
- United Kingdom -- an 84 cents per barrel import duty on products, but no duty on crude oil. Because product imports account for only 16% of total oil imports, the average duty is 13 cents per barrel.
- United States -- no duty as such. License fees are required on some imports. However, most imports are license free, and the impact of these fees is negligible; according to FEA no more than 2 cents to 3 cents per barrel.
- West Germany -- an 84 cents per barrel import duty on products, but no duty on crude oil. Because product imports account for 30% of total oil imports, the average duty is 25 cents per barrel.

3. Most of consuming government taxes are in the form of excise taxes as shown below. A detailed breakdown in contained in the attached table.

Estimated Total Consumer Government Excise Taxes

	US $ per Barrel
France	8.40
Italy	9.54
Japan	4.48
United Kingdom	6.67
United States	2.53
West Germany	8.85

Consumer Government Taxes and Duties[1]

US $

Product	Tax per Gallon	Gallons per Barrel	Total Tax
France	**0.20**	**42.0**	**8.40**
Gasoline	0.76	5.9	4.47
Diesel fuel	0.46	2.5	1.16
Heating oil	0.08	14.7	1.18
Heavy fuel oil	....	13.0	....
Other products	0.27 (est)	5.9	1.59
Italy	**0.23**	**42.0**	**9.57**
Gasoline	1.18	6.3	7.43
Diesel fuel	0.38	3.4	1.28
Heating oil	0.03	6.3	0.19
Heavy fuel oil	0.02	22.3	0.45
Other products	0.06 (est)	3.7	0.22
Japan	**0.11**	**42.0**	**4.63**
Gasoline	0.47	4.6	2.12
Diesel fuel	0.75	2.9	2.17
Heating oil	0.01	3.4	0.03
Heavy fuel oil	0.01	19.3	0.19
Other products	0.01 (est)	11.8	0.12
United Kingdom	**0.16**	**42.0**	**6.80**
Gasoline	0.53	7.2	3.78
Diesel fuel	0.53	2.5	1.34
Heating oil	0.02	6.3	0.13
Heavy fuel oil	0.02	16.8	0.34
Other products	0.13 (est)	9.2	1.21
United States	**0.06**	**42.0**	**2.50-2.60**
Gasoline	0.12	18.5	2.22
Diesel fuel	0.12	1.3	0.15
Heating oil	0.01	4.5	0.05
Heavy fuel oil	0.01	7.1	0.07
Other products	0.01 (est)	10.6	0.01-0.10
West Germany	**0.22**	**42.0**	**9.10**
Gasoline	0.80	5.9	4.70
Diesel fuel	0.75	3.4	2.52
Heating oil	0.07	15.9	1.12
Heavy fuel oil	0.06	9.2	0.55
Other products	0.03 (est)	7.6	0.21

1. Tax take for the four main products includes import duties, excise taxes and value-added taxes. Tax rates for other products are estimated on the basis of information available for lubricating oil and kerosene.

World Crude Oil Production

Thousand b/d

	Sep 1973 (Pre-Crisis Level)	1974					
		1973	1st Qtr	Apr	May	Jun	July
Western hemisphere	**16,042**	**16,118**	**15,930**	**15,680**	**15,490**	**15,590**	**15,480**
United States	9,149	9,189	9,000	8,960	8,940	8,940	8,960
Venezuela	3,387	3,364	3,230	3,040	2,930	2,960	2,940
Canada	1,745	1,798	1,860	1,810	1,750	1,780	1,680
Mexico	470	465	500	530	530	600	700
Ecuador	210	204	230	240	240	210	100
Other	1,081	1,098	1,110	1,100	1,100	1,100	1,100
Eastern hemisphere	**41,974**	**39,552**	**40,290**	**41,500**	**41,800**	**41,680**	**40,540**
Western Europe	389	370	360	360	380	400	400
Middle East	22,977	21,158	21,280	22,600	22,700	22,620	22,020
Saudi Arabia	8,574	7,607	7,820	8,650	9,020	8,890	8,790
Iran	5,793	5,861	6,130	6,180	6,180	6,060	6,060
Kuwait	3,520	3,024	2,840	2,830	2,840	2,880	2,280
Iraq	2,167	1,964	1,800	1,870	1,590	1,760	1,810
Abu Dhabi (UAE)	1,381	1,298	1,320	1,630	1,640	1,590	1,650
Qatar	608	570	520	520	520	520	520
Oman	302	293	300	300	300	300	290
Dubai (UAE)	273	220	230	240	230	240	240
Other	359	321	320	380	380	380	380
Africa	6,132	5,902	5,660	5,580	5,740	5,660	5,100
Libya	2,286	2,187	1,890	1,750	1,950	1,770	1,400
Nigeria	2,100	2,053	2,250	2,280	2,270	2,340	2,200
Algeria	1,100	1,070	970	1,000	1,000	1,000	950
Other	646	592	550	550	520	550	550
Asia-Pacific	2,288	2,257	2,390	2,360	2,380	2,400	2,420
Indonesia	1,338	1,324	1,440	1,440	1,450	1,450	1,470
Other	950	933	950	920	930	950	950
Communist countries	10,188	9,865	10,600	10,600	10,600	10,600	10,600
USSR	8,663	8,420	8,900	8,900	8,900	8,900	8,900
China	1,140	1,060	1,310	1,310	1,310	1,310	1,310
Romania	275	275	280	280	280	280	280
Other	110	110	110	110	110	110	110
World total	**58,016**	**55,670**	**56,220**	**57,180**	**57,290**	**57,270**	**56,020**
Of which:							
OPEC members[1]	32,737	30,746	30,670	31,670	31,860	31,670	30,410
OAPEC members[2]	20,311	18,272	17,640	18,810	19,140	19,000	18,020

1. The members of the Organization of Petroleum Exporting Countries are Algeria, Ecuador, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

2. The members of the Organization of Arab Petroleum Exporting Countries are Algeria, Bahrain, Egypt, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, Syria, and United Arab Emirates.

Recent Trends in Arab Oil Production[1]

	1973			1974					
	Sep	Nov	Dec	1st Qtr	Apr	May	Jun	Jul	Aug
	Production (Thousand b/d)								
Total	20,613	15,684	16,005	17,940	19,110	19,440	19,300	18,310	17,520
Saudi Arabia[2]	8,574	6,269	6,616	7,820	8,650	9,020	8,890	8,790	8,200
Kuwait[2]	3,520	2,582	2,556	2,840	2,830	2,840	2,880	2,280	2,100
Libya	2,286	1,766	1,769	1,890	1,750	1,950	1,770	1,400	1,400
Iraq	2,167	2,026	2,136	1,800	1,870	1,590	1,760	1,810	1,810
Abu Dhabi (UAE)	1,381	1,153	1,016	1,320	1,630	1,640	1,590	1,650	1,650
Algeria	1,100	880	860	970	1,000	1,000	1,000	950	900
Qatar	608	465	460	520	520	520	520	520	520
Oman	302	302	302	300	300	300	300	290	290
Dubai (UAE)	273	140[3]	141[3]	230[3]	240	230	240	240	240
Sharjah (UAE)[4]	....	....	....	....	....	....	....	30	60
Other[5]	402	99[6]	149[6]	250[6]	320	350	350	350	350
	Percent Decrease from September 1973								
For all countries	....	24	22	13	7	6	6	11	15

1. This table illustrates the effect of the OAPEC decisions of 4 November and 25 December on Arab oil production through August 1974, Iraq did not sign the agreements; Oman, which is not a member of OAPEC, did not reduce production.
2. Including approximately one-half of Neutral Zone production.
3. Production reduced by offshore well fire.
4. Production began in mid-July at 50,000-60,000 b/d.
5. Including data for Bahrain, Egypt, and Syria.
6. Production decreased in Egypt and Syria as a result of war activity.

Arab Oil: Productive Capacity, August 1974

Thousand b/d

	Estimated Productive Capacity	Underutilization of Productive Capacity
Total	23,760	6,240
Saudi Arabia[1]	9,700	1,500
Kuwait[1]	3,800	1,700
Libya	3,000	1,600
Iraq	2,500	690
Abu Dhabi (UAE)	1,900	250
Algeria	1,100	200
Qatar	700	180
Oman	300	10
Dubai (UAE)	300	60
Sharjah (UAE)	60	....
Other[2]	400	50

1. Including approximately one-half of Neutral Zone production capacity.
2. Including data for Bahrain, Egypt, and Syria.

European Cargo Prices[1]
1974

US $ per Barrel

	F.O.B. Rotterdam				F.O.B. Italy			
	Heavy Fuel Oil				Heavy Fuel Oil			
	1% Sulfur	3.5% Sulfur	Gas Oil 0.5% Sulfur	Gasoline (Premium)	1% Sulfur	3.5% Sulfur	Gas Oil 0.5% Sulfur	Gasoline (Premium)
Jan 4	20.27	19.52	22.20	22.34	19.52	18.77	21.52	20.87
11	17.64	15.01	17.49	16.76	16.52	14.26	16.55	16.76
18	17.64	14.64	16.88	16.76	16.14	14.26	16.55	16.17
25	16.14	14.64	17.22	17.45	16.14	14.64	14.91	17.35
Feb 1	15.40	13.88	14.36	17.51	15.40	13.88	13.90	16.76
8	12.61	11.34	13.57	18.23	12.61	11.34	12.10	17.64
15	12.58	11.64	13.38	20.40	12.58	12.02	12.05	19.57
22	12.38	11.64	13.57	20.14	12.38	11.64	12.05	19.57
Mar 1	12.01	11.34	13.10	20.10	12.38	11.94	12.05	19.80
8	11.41	11.18	13.84	21.27	12.61	12.16	12.05	21.27
15	10.58	9.76	13.31	22.45	10.88	11.26	12.31	22.45
22	10.58	9.83	13.10	23.08	10.70	9.95	12.03	22.49
29	9.91	9.16	12.73	22.45	9.91	9.38	11.38	22.05
Apr 5	9.91	9.16	11.07	22.57	10.06	9.16	10.92	22.22
12	10.48	9.61	9.79	21.15	10.21	9.12	9.47	20.87
19	10.14	9.34	11.73	20.47	9.91	9.31	10.00	19.70
26	9.68	9.38	12.10	20.22	9.46	9.30	10.09	19.26
May 3	9.98	9.84	11.59	21.27	9.68	9.16	10.45	19.15
10	10.28	10.06	12.91	21.15	9.91	9.61	11.98	19.56
17	10.13	9.98	12.64	20.97	9.98	9.68	11.66	19.39
24	10.44	10.28	12.05	20.09	10.13	9.53	11.32	18.91
31	10.59	10.44	12.12	19.39	9.99	9.65	11.69	18.92
Jun 7	10.59	10.14	12.12	18.51	10.14	9.69	11.33	17.92
14[2]	10.06	9.54	11.87	17.82	9.76	9.16	11.17	17.35
21[2]	9.95	9.46	11.74	16.82	9.76	9.16	11.17	16.17
28[2]	9.87	9.35	11.80	15.52	9.76	9.16	11.30	14.99
Jul 3[2]	9.87	9.35	11.94	15.52	9.76	9.16	11.57	14.89
12[2]	9.72	9.35	12.54	14.75	9.68	9.16	12.07	14.16
19[2]	9.72	9.16	12.64	14.16	9.50	9.16	11.94	13.81
26[2]	9.76	9.01	12.40	14.40	9.39	9.01	11.87	13.81
Aug 2[2]	9.61	8.94	12.14	13.92	9.39	9.01	11.87	13.28
9[2]	9.63	8.99	12.23	13.67	9.40	8.92	12.10	13.02
16[2]	9.63	8.99	12.30	13.37	9.40	8.92	12.13	12.78
23[2]	9.98	9.31	12.29	13.48	9.42	9.05	12.10	12.74
Sep 6[2]	10.19	9.40	12.60	13.52	9.85	9.55	12.13	12.37
13[2]	10.11	9.44	12.68	13.52	9.85	9.70	12.13	12.37

1. Unless otherwise indicated, midpoint of the range of the prices quoted in the *Oil Buyers' Guide.*
2. Midpoint of the range of the prices quoted in the *Platt's Oilgram Price Service.*

Retail Petroleum Product Prices

US Cents per Gallon

	Gasoline							
	Regular		Premium		Diesel Fuel		Domestic Heating Oil	
	Price[1]	Tax	Price[1]	Tax	Price[1]	Tax	Price[1]	Tax
United States								
1973 - Oct	40	12	44	12	23	12	24	1[2]
1974 - Jan	46	12	50	12	32	12	33	1[2]
Feb	49	12	53	12	34	12	34	1[2]
Mar	53	12	56	12	35	12	34	1[2]
Apr	54	12	58	12	35	12	35	1[2]
May	55	12	59	12	36	12	36	1[2]
Jun	56	12	59	12	36	12	36	1[2]
Jul	56	12	59	12	37	12	37	1[2]
France								
1973 - Oct	98	72	105	76	68	44	28	6
1974 - Jan	126	70	136	75	81	42	41	8
Feb	126	70	136	75	81	42	41	8
Mar	126	70	136	75	81	42	41	8
Apr	126	70	136	75	81	42	41	8
May	126	70	136	75	81	42	41	8
Jun	126	70	136	75	81	42	41	8
Jul	130	74	140	79	85	46	41	8
Italy								
1973 - Oct	104	78	110	80	56	27	27	3
1974 - Jan	112	85	118	87	67	37	28	3
Feb	146	93	154	96	80	38	42	3
Mar	146	93	154	96	80	38	42	3
Apr	146	93	154	96	80	38	42	3
May	146	93	154	96	80	38	42	3
Jun	146	93	154	96	80	38	42	3
Jul	170	116	178	120	80	38	42	3
West Germany								
1973 - Oct	101	73	112	74	102	69	25	1
1974 - Jan	124	75	134	76	126	71	46	1
Feb	124	75	134	76	126	71	46	1
Mar	124	75	134	76	126	71	46	1
Apr	124	75	134	76	126	71	46	1
May	124	75	134	76	126	71	46	1
Jun	124	75	134	76	126	71	46	1
Jul	124	75	134	76	126	71	46	1
United Kingdom								
1973 - Oct	69	44	72	44	69	44	19	2
1974 - Jan	75	44	78	44	75	44	23	2
Feb	93	44	97	44	94	44	38	2
Mar	93	44	97	44	94	44	38	2
Apr	103	53	107	53	106	53	38	2
May	103	53	107	53	106	53	38	2
Jun	103	53	107	53	106	53	38	2
Jul	103	53	107	53	106	53	38	2
Japan								
1973 - Oct	87	38	101	38	54	20	19	....
1974 - Jan	114	38	128	38	N.A.	20	N.A.	....
Feb	114	38	128	38	N.A.	20	N.A.	....
Mar	114	38	128	38	70	20	32	....
Apr	134	46	148	46	74	20	39	....
May	134	46	148	46	74	20	39	....
Jun	134	46	148	46	74	20	39	....
Jul	134	46	148	46	74	20	39	....

1. Including tax.
2. Estimated.

Estimated Oil Imports, by Source[1]
1973

Thousand b/d and Percent of Imports

	Total Arab and Non-Arab	Arab Countries							
		Total	Saudi Arabia	Kuwait	Libya	Iraq	Abu Dhabi	Al-geria	Other
United States	6,200	1,590	590	160	350	50	160	140	140
%	100.0	25.6	9.5	2.6	5.6	0.8	2.6	2.3	2.3
Japan	5,400	2,390	1,240	540	20	Negl.	430	....	160
%	100.0	44.3	23.0	10.0	0.4	Negl.	8.0	....	3.0
Canada	1,000	220	80	Negl.	40	20	60	....	20
%	100.0	22.0	8.0	Negl.	4.0	2.0	6.0	....	2.0
Western Europe	15,200	10,600	4,000	1,700	1,590	1,160	600	790	770
%	100.0	69.7	26.3	11.2	10.5	7.6	3.9	5.1	5.1
United Kingdom	2,330	1,480	550	400	240	60	50	50	130
%	100.0	63.5	23.6	17.2	10.3	2.6	2.1	2.1	5.6
West Germany	2,250	1,610	480	90	550	30	110	280	70
%	100.0	71.6	21.3	4.0	24.4	1.3	4.9	12.4	3.1
Italy	2,440	1,930	630	200	460	430	....	....	210
%	100.0	79.1	25.8	8.2	18.9	17.6	....	....	8.6
France	2,780	2,070	620	320	130	380	290	230	100
%	100.0	74.5	22.3	11.5	4.7	13.7	10.4	8.3	3.6
Netherlands[2]	2,090	1,340	690	380	60	10	80	20	100
%	100.0	64.1	33.0	18.2	2.9	0.5	3.8	1.0	4.8
Belgium-Luxembourg	720	550	290	120	30	30	10	50	20
%	100.0	76.4	40.3	16.7	4.2	4.2	1.4	6.9	2.8
Spain	1,000	820	470	90	40	50	....	110	60
%	100.0	82.0	47.0	9.0	4.0	5.0	....	11.0	6.0
Other	1,590	800	270	100	80	170	60	40	80
%	100.0	50.3	17.0	6.3	5.0	10.7	3.8	2.5	5.0

	Non-Arab Countries						
	Total	Iran	Vene-zuela	Indo-nesia	Canada	Nigeria	Other
United States	4,610	420	1,840	250	1,100	550	450
%	74.4	6.8	29.7	4.0	17.7	8.9	7.3
Japan	3,010	1,730	10	840	....	100	330
%	55.7	32.0	0.2	15.6	....	1.9	6.1
Canada	780	180	470	Negl.	....	80	50
%	78.0	18.0	47.0	Negl.	....	8.0	5.0
Western Europe	4,600	2,150	320	Negl.	....	1,130	1,000
%	30.3	14.1	2.1	Negl.	....	7.4	6.6
United Kingdom	850	460	80	Negl.	....	180	130
%	36.5	19.7	3.4	Negl.	....	7.7	5.6
West Germany	640	270	40	Negl.	...	200	130
%	28.4	12.0	1.8	Negl.	....	8.9	5.8
Italy	510	330	20	....	....	10	150
%	20.9	13.5	0.8	....	....	0.4	6.1
France	710	220	40	....	....	250	200
%	25.5	7.9	1.4	....	....	9.0	7.2
Netherlands[2]	750	440	50	....	....	220	40
%	35.9	21.1	2.4	....	....	10.5	1.9
Belgium-Luxembourg	170	100	20	....	....	30	20
%	23.6	13.9	2.8	....	....	4.2	2.8
Spain	180	120	40	....	....	10	10
%	18.0	12.0	4.0	....	....	1.0	1.0
Other	790	210	30	....	....	230	320
%	49.7	13.2	1.9	....	....	14.5	20.1

1. This table allocates imports on a direct and indirect basis--i.e., refined products from export refineries are traced to the source of the crude oil.
2. Excluding oil transhipped to other West European countries.

CONFIDENTIAL

S-6507

27 September 1974

MEMORANDUM FOR: The Honorable Charles A. Cooper
Assistant Secretary for
International Affairs
Department of the Treasury

SUBJECT : Studies on the World Oil Problem

The attached material was prepared in response to your request for support for this Saturday's meeting of the Big Five foreign and finance ministers at Camp David. Please let us know if we can be of further help.

25X1

Attachment:
As stated

25X1

CONFIDENTIAL

MEMORANDUM FOR: [redacted]

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There are attached six separate memoranda and several tables of statistics stapled together. They were prepared for Charles Cooper, Assistant Secretary of Treasury for Kissinger's use at the Five Power Conference on the world oil problem to be held at Camp David this Saturday.

(DATE)

FORM NO. 1 AUG 54 101 REPLACES FORM 10-101 WHICH MAY BE USED. (47)

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